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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,983	05/08/2000	GUSTAVO DECO	P000861	5072

7590 06/12/2002

SCHIFF HARDIN & WAITE  
PATENT DEPARTMENT  
6600 SEARS TOWER  
CHICAGO, IL 60606-6473

EXAMINER

OROPEZA, FRANCES P

ART UNIT	PAPER NUMBER
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3762

DATE MAILED: 06/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/530,983

Applicant(s)

DECO ET AL.

Examiner

Frances P. Oropeza

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 May 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Acknowledgement***

1. As requested by the Applicant in Paper No. 9, the substitute specification has been entered into the record.

### ***Response to Arguments***

2. The Andersson reference is read as predicting an abnormality (a cardiac output imbalance) in a dynamic system (an individual's cardiovascular system) and implementing an action (changing the cardiac output by increasing / decreasing the stimulation rate of the pacemaker to impact the heart rate) opposing the abnormality using a information flow (registering the IEGMs and detecting systemic changes to estimate (predict) the workload) to predict a trend or future state (the increased or decreased workload level). As amended, independent claims 1, 16 and 17 include the element of "using an information flow that describes a development of a predictability of several future system states". As noted by the Applicant, the Andersson reference does not predict "an abnormality of a dynamic system... using information flow that describes a development of predictability of several future system states", hence a new ground of rejection is presented below.

3. The Applicant states the combination of Spitzer et al., Andersson and Dorfmeister et al. does not disclose or suggest using an electrode to supply a magnetic field. Dorfmeister et al. discloses a system to predict a change in the activity of a person's brain, including output electrodes (26) and (28) that provide magnetic activation or deactivation of a nerve or region of the subject's brain (c 6, ll 52-62).

***Claim Rejections - 35 USC § 102***

4. Claims 1-3, 10, and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ravdin et al. (US 5862304). Ravdin et al. disclose a method for predicting the future occurrence of non-existent medical conditions, including medical conditions such as psychiatric problems (c 3, ll 19-27). Data is evaluated to predict the future occurrence of the medical condition that has not yet occurred using a neural network to analyze the data (Abstract). Once the neural network is trained, test data is used to predict the future occurrence of the disease or medical condition (c 2, ll 43-50). The prediction of the medical condition enables selection of appropriate therapy (c 1, ll 15-28).

***Claim Rejections - 35 USC § 103***

5. Claims 4-9 and 11-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Ravdin et al. (US 5862304) in view of Abrams et al. (US 6117066). As discussed in paragraph 4 of this action, Ravdin et al. discloses the claimed invention except for the nature of the implemented action being excitation of the system with a chaotic signal, a noise signal or a regular signal supplied by an electric or magnetic field via an electrode.

Abrams et al. disclose a treatment for certain neurological and psychiatric disorders discussing the historical use of pulsed electrical current (c 1, l 38 – c 3, l 4) and an alternate approach using electrodes (10-13) to provide pulsed magnetic fields with varying intensity (c 4, l 61 – c 5, l 19). The signals provided would be classified as a chaotic signal, a noise signal or a regular signal depending on the intensity and impact of the signal. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the

Art Unit: 3762

method for predicting the future occurrence of non-existent medical conditions as taught by Ravdin et al., with the nature of the implemented action being excitation of the system with a chaotic signal, a noise signal or a regular signal supplied by an electric or magnetic field via an electrode as taught by Abrams et al. to provide proven means to treat neurological and psychiatric disorders so that damaging and potential fatal conditions associated with neurological and psychiatric disorders such as seizures can be identified and treated before they occur.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 3762

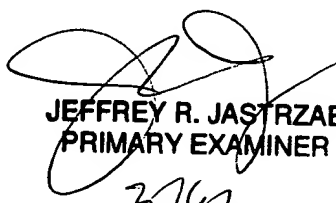
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fran Oropeza whose telephone number is (703) 605-4355. The examiner can normally be reached on Monday – Thursday from 6 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes can be reached on (703) 308-5181. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 306-4520 for regular communication and (703) 306-4520 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Frances P. Oropeza  
Patent Examiner  
Art Unit 3762

*FPO*  
*6/7/02*

  
JEFFREY R. JASTRZAB  
PRIMARY EXAMINER  
*3762*

*6/7/02*